DOCUMENT RESUME

ED 135 926 UD 016 824

AUTHOR Bertoldi, Arthur R.
TITLE Remediation for Auxiliary Service Students; Evaluation Period, School Year 1974-1975.
INSTITUTION New York City Board of Education, Brooklyn, N.Y. Office of Educational Evaluation.
PUB DATE 75
NOTE 29p.; New York City Board of Education Function No. B/E 09-59680. The Appendix is not reproducible due to marginal legibility of the original document

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS *Dropout Programs; *High School Equivalency Programs; *High School Students; *Remedial Mathematics; *Remedial Reading; Secondary Education; Vocational Counseling
IDENTIFIERS *Auxiliary Services for High Schools; Elementary Secondary Education Act Title I; ESEA Title I; *New York (New York)

ABSTRACT

This report presents a description and evaluation of the Auxiliary Services Program. This program provided counseling, remedial math and remedial reading instruction, and high school equivalency study to Title I students who were two or more years below grade level. Eleven day and evening centers located in various boroughs in New York participated. The evaluation consisted of a comparison between pre and post test scores achieved on the Metropolitan Achievement Test in reading and on the New York State Arithmetic Computation Test in Mathematics. In addition students' scores on alternate forms of these test were obtained at various points during the program. High school grade levels at the time of enrollment were noted and a detailed account of attendance records was also maintained. Among the major findings of the evaluation are the following: 1) although monthly and daily attendance patterns were flexible, the average student attended school for five and one half months or 54 days of instruction, 2) both remedial programs produced statistically significant achievement growth. (Author/AM)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED135926

EVALUATION REPORT _____

Function No. B/E 09-59680

REMEDIATION FOR AUXILIARY SERVICE STUDENTS

EVALUATION PERIOD
SCHOOL YEAR 1974 - 1975

DR. ARTHUR R. BERTOLDI
EVALUATOR - CONSULTANT

An evaluation of a New York City School district educational project funded under Title I of the Elementary and Secondary Education Act of 1965 (PL 89-10) performed for the Board of Education of the City of New York for the 1974 - 1975 school year.

Dr. Anthony J. Polemeni, Director

BOARD OF EDUCATION OF THE CITY OF NEW YORK
OFFICE OF EDUCATIONAL EVALUATION
110 LIVINGSTON STREET
BROOKLYN, N.Y. 11201

UD016824

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Remediation For Auxiliary Service Students

Table of Contents

Section	Topic	Page
I	The Program	1
II	Evaluation Procedures	6
III	Evaluation Findings	10
IV	Summary of Major Findings, Conclusions and Recommendations	24
V	Exemplary Program Abstract	26
	Appendix	
	Chart	
I	ASHS Title I Program: Student and Adult Participants	3
II	ASHS Title I Students Attendance By Months	11
III	ASHS Title I Students Attendance By Days	11
IV	Reading Scores By Schools	14
V	Reading Scores By Schools and Days Attended	15
VI	Reading Scores By Months Attended	15
VII	Math Scores By Schools	18
VIII	Math Scores By Schools and Days Attended	19
IX	Math Scores By Months Attended	19

REMEDIATION FOR AUXILIARY SERVICE STUDENTS

I. THE PROGRAM

The Auxiliary Services Program is a service oriented alternative school concept and optional learning environment established to serve educationally disadvantaged students who have found it difficult to adjust to the conventional high school settings and therefore, are regular school dropouts. Auxiliary Services provides counseling, remedial math and reading instruction and high school equivalency study for Title I students in eleven day and evening centers in Brooklyn, Manhattan, Queens and the Bronx.

The ASHS program is based on the premise that the differential services it offers can be organized so as to help the dropout bridge the gap between school and the world of work, and afford him a second and broader opportunity to further his education or to develop skills which will make him more employable.

The objectives of the program, as abstracted from the proposal are:

1. to provide immediate help for school leavers at the point at which they leave school so that they can enter the labor market at the highest possible level, while continuing their efforts to upgrade their skills on a part-time basis.

2. to remotivate school leavers to take advantage of educational resources that are available to them so that they can move upward on a career ladder;

3. to provide continuity of services and continuity of operations to current clients;

4. to make the school leaver aware of the community, city, state and federal resources that are available to him.

5. to return school leavers to some type of educational setting for high school, trade school or college training.

The ASHS instruction program can be conceived of as having three separate units designed to integrate the programs dual objectives of developing the educational and vocational potentials of school leavers by providing a variety of service options to them. These three units are basic education - high school equivalency, vocational - job placement and counseling.

The services that are offered to students include any or all of the following:

Vocational, educational and personal counseling

Job development, referral and placement

Remedial reading

Remedial math

High School Equivalency preparation

English as a Second Language

Business skills training - typing

Continual follow-up

The ASHS student is able to move from one service to another without disturbing the flow of the program. There are no limits on the number of services a student may avail himself of or the number of sessions he may attend. As a matter of fact, a student is encouraged and motivated to exert the initiative to progress from basic reading and math levels to more advanced academic achievement levels, through high school equivalency and on to job careers and college placement.

TITLE I PROGRAM

The Title I program is designed to provide remedial reading and remedial mathematics instruction to optional assignment Title I pupils who are 2 or more years below grade level at Auxiliary Services High Schools. The program is scheduled to serve 1,424 eligible pupils (1,025 in 5 day centers; 399 in 6 evening centers). The day centers meet from 8:00 am to 4:30 pm, while the evening centers are open for 3 hours with times ranging from 5:00 pm to 9:00 pm. The staff is to consist of 40 full-time teachers, 25 educational assistants in the day centers and 30 educational assistants in the evening centers as follows:

CHART I

ASHS TITLE I PROGRAM: STUDENT AND ADULT PARTICIPANTS 1974 - 1975

Gr. = Grade

DAY CENTERS

	ADULTS		STUDENTS			
School	Teachers	Assistants	Gr. 10	Gr. 11	Gr. 12	Students Total
Ebbets Field	2	5	98	12	140	250
93 Street	2	5	80	14	131	225
Jamaica Vocational	2	5	28	8	139	175
Forsythe Street	2	5	82	15	153	250
Roberto Clemente	2	5	40	20	65	125
Total Day	Total Teachers 10	Total Assistants 25	328	69	628	1025

EVENING CENTERS

	ADULTS		STUDENTS			
School	Teachers	Assistants	Gr. 10	Gr. 11	Gr. 12	Students Total
Jamaica Vocational	0	5	20	10	35	65
Maxwell	0	5	20	10	35	65
Julia Richman	0	5	20	15	30	65
Taft	0	5	20	10	35	65
Prospect Heights	0	5	20	10	30	60
Brandeis	0	5	29	10	40	79
Total Evening	Total Teachers 0	Total Assistants 30	129	65	205	399

Title I Optional Assignment students, are to be selected for participation from Auxiliary Services Centers, who are two or more years retarded in reading and/or math. Selections are to be made by guidance counselors, teachers and administrators. Their zoned high schools, and reading grade lists of the names of students, are available upon request.

As part of their optional assignment instructional program, the Title I participating pupils are to attend a daily supplementary remedial reading and/or remedial math class. Each pupil is to be given a diagnostic test at the start of the program. The reading test will be the Metropolitan Achievement Test. The math test will be the New York State Arithmetic Computation Test. Individualized remedial prescriptive programs will be prepared for pupils based on the test diagnosis and teacher recommendations. The remedial prescription may be for one day, for one week, or for a one month set of lessons designed to overcome a single skill deficiency at a time. The pupil will be given individualized attention by the teacher or the educational assistant on a regular and "as needed" basis. His progress will be periodically evaluated. As each identified weakness is overcome the process will be repeated. As needed, the remedial reading student will be instructed in the mastery of word attack skills, phonics, acquisition of vocabulary, dictionary skills, work study skills, reading comprehension, increasing reading rate, etc. As needed, the remedial mathematics student will be instructed in understanding basic algorithms, types of calculation required in situations requiring computation, arithmetic operations, drills and individualized math skills.

REMEDIAL READING PROGRAM

The remedial reading program is essentially an individualized Teacher to one student and small group instructional program. "Self-paced" programmed kits and readers are used with students to coordinate and monitor the reading growth of pupils.

Teachers provide a diagnostic/prescriptive mode of reading instruction by utilizing a variety of reading materials to meet the individual student's needs. Both Commerical and Teacher prepared materials are used such as multi-leveled textbooks; workbooks; skill-lists; skill-books; co-basal readers; phonics

dittos; reading kits and "self-correcting" programmed materials. In addition, library books, pocketbooks, and dictionaries are available.

REMEDIAL MATH PROGRAM

The remedial math program is conducted under the direction of a skilled math teacher and qualified educational assistants. The program is essentially a diagnostic/prescriptive self-paced individualized program of math instruction.

Multi-leveled programmed math self-correcting materials are basically used, in conjunction with teacher prepared materials, to meet the identified needs of students.

The remedial math program utilizes math book skill texts, math dittos, worksheets, workbooks and teacher made materials to provide the sequential organization and objectives for proper skill development.

II. EVALUATION PROCEDURES

A. PROGRAM AND EVALUATION OBJECTIVES

1. Program Objective # 1: As a result of participation in the remedial reading program, the reading grade of the students will show a statistically significant difference between the real post-test score and the anticipated post-test on the Metropolitan Achievement Test.
2. Program Objective # 2: As a result of participation in this remedial math program, the math grade of the students will show a statistically significant difference between the real post-test score and the anticipated post-test score on the New York State Computation Test.
3. Evaluation Objective # 3: To determine the extent to which the program, as actually carried out, coincided with the program as described in the Project Proposal.
    a. On-site visitations were conducted throughout the year at the centers in order to determine through observations the actual program being offered to Title I students and to determine the similarities of the ASHS program offered with the ASHS-Title I program planned.

B. EVALUATION PROCESS

1. Subjects: All participants in the project. 1,424 Title I students, 10 Title I Teachers and 35 Title I Educational Assistants.
2. All eligible Title I students at their time of entrance into the, "Remediation for Auxiliary Service Students - Optional Assignment Program" were administered the Metropolitan Achievement Test in Reading and the New York State Arithmetic Computation Test in Math which served as the pre-test data in reading and math as part of the historical regression evaluation procedures model.

3. High School grade level at time of entrance was recorded, along with other personal history data for guidance cumulative records.

4. Detailed attendance records were maintained because of the high degree of mobility and flexibility with regards to Title I students' attendance problems and commitment to the Auxiliary Services Program. In addition to the number of months Title I students participated in the program, the number of days each student participated in the program were equally recorded. It became apparent early in the program that some students came 5 days a week, others 2 days per week; still others came 2 weeks and missed 2 weeks etc.

5. Periodically and at their time of leaving all Title I students (when available) were administered an alternate form of the Metropolitan Achievement Test in Reading and the New York State Arithmetic Computation Test in Math, which were designed to serve as the post-test data in reading and math as part of the historical regression analysis of data evaluation model.

C. EVALUATION "IN-PUT" DATA

1. All participants : 1,424 students (population sample)
2. All centers (5 day, 6 evening); 11 centers
3. Attendance records: no. of months in program
4. Attendance records: no. of days in program
5. High School Grade Level at entrance: Entrance level
6. Pre-test Reading score at entrance
7. Pre-test Math score at entrance
8. Post-test Reading score at leaving
9. Post-test Math score at leaving

D. EVALUATION METHODS AND ANALYSIS

1. All "input" data will be obtained for each student.
2. Data will be analyzed by the Real (treatment) Post-test vs. Anticipated (without treatment) Post-test evaluation design.
3. The difference for significance between the groups (students) predicted (anticipated) post-test mean and the obtained post-test mean will be tested with a correlated t-ratio.

E. EVALUATION DELIMITATIONS

It should be noted that the basic evaluation design procedures and data analysis did not anticipate the unique factors of the attendance patterns of the Title I students who participated in the ASHS study of the "Remediation For Auxiliary Service Students - Optional Assignment" program.

First: It was impossible to obtain a pre-test score during the first week of the program because Title I Auxiliary Remedial Services is not a fixed program over a fixed period of time. Title I students do not enter or leave the ASHS program at any single point in time during the school year. There are no quarters, semesters or program blocks of time to evaluate. The evaluation model as prescribed, proceeded as per design up to November 1974 with 1,424 students. However, because of the high degree of mobility and attendance flexibility among the Title I students in the program, it soon became apparent that many of the students present in October would leave by December and throughout each month of the school year. In addition, simultaneously as students left, new Title I students were enrolled into the program each month to continuously maintain a roster 1,424 active Title I students. Under such circumstances the maintenance of pre-test and post-test scores and evaluation data soon became a monumental clerical task. The delimitation of clerical error

in such a process is hereby noted (and accounted for in final statistical analysis), as well as the recognition that a different student population and a different instructional program was in effect each month. These are statistical variables which must be delimited and a statistical margin of error accounted for.

Therefore, the data gathering/analysis/evaluation procedures of accounting for each Title I student by no. of months and days of attendance in the program, regardless of which month he entered or left the Auxiliary Services program, was started in January 1975. All Title I students were pre-tested at entrance and post-tested when they left the program or at the end of selected 2 month periods throughout the school year, (which included a general post-test for all students in May at the end of the year).

The different pre-test and post-test periods and lack of standardization in the testing process and the different attendance periods for students/programs throughout the year should be recognized as serious statistical delimitations to this evaluation study. Wherever possible variables were controlled and margins of error were accounted for in all statistical calculations.

III. EVALUATION FINDINGS

A. GROUP IDENTIFICATIONS

For purposes of interpreting data presented in this report the following group identification key should be used:

Group 1 Individual "ASHS" High School

Group 2 Individual "ASHS" High School

Group 3 Individual "ASHS" High School

Group 4 Individual "ASHS" High School

Group 5 Individual "ASHS" High School

Group 6 Individual "ASHS" High School

Group 7 Individual "ASHS" High School

Group 8 Individual "ASHS" High School

Group 9 Individual "ASHS" High School

Group 10 Individual "ASHS" High School

Group 11 Totals of all schools combined

B. ATTENDANCE DATA

Charts II and III: Key

Title I Student Profile Data - Attendance by months and days

Months = months of attendance in program

N = number of students in the program by months who had Math and Reading pre and post test scores

% = % of total students in program

Days = number of days in program, total days of attendance, cumulative for school year 1974 - 1975 irrespective of months

CHART II: ASHS TITLE I STUDENTS ATTENDANCE BY MONTHS*

MONTHS	GR. 1		GR. 2		GR. 3		GR. 4		GR. 5		GR. 6		GR. 7		GR. 8		GR. 9		GR. 10		GR. 11 TOTAL		25% 50% 75%
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
1	-	-	1	5	1	2	-	-	9	13	9	7	19	6	5	4	-	-	5	12	49	4	
2	-	-	1	5	3	6	2	2	4	6	13	10	32	11	5	4	-	-	2	4	62	5	
3	12	17	2	1	11	23	14	14	12	17	13	10	44	16	10	8	14	8	8	19	140	11	25%
4	8	11	28	13	16	34	32	32	13	18	7	5	8	3	18	15	15	9	4	9	150	12	← 3.5
5	15	21	43	20	10	21	10	10	12	17	6	5	17	6	10	9	26	14	1	2	150	12	50%
6	20	28	13	6	3	6	5	5	15	21	6	5	23	8	4	3	23	12	5	12	117	9	← 5.5
7	3	4	18	8	1	2	10	10	5	8	5	4	15	5	9	8	53	28	6	14	125	10	
8	4	5	53	24	1	2	9	9	-	-	24	18	5	5	7	6	38	20	3	7	144	11	75%
9	2	3	20	9	-	-	2	2	-	-	11	8	3	1	3	3	1	1	2	5	44	3	← 8.5
10	7	10	6	2	-	-	-	-	-	-	2	2	38	12	11	9	4	2	-	-	69	5	
10+	1	1	35	16	1	2	15	15	-	-	34	26	94	31	37	31	12	6	6	14	235	18	
MEAN	5.6		6.5		4.0		4.9		4.1		5.3		5.0		5.4		6.2		4.8		5.5		
TOT.	72		220		47		99		70		130		298		119		187		43		1285		

CHART III: ASHS TITLE I STUDENTS ATTENDANCE BY DAYS*

DAYS	GR. 1		GR. 2		GR. 3		GR. 4		GR. 5		GR. 6		GR. 7		GR. 8		GR. 9		GR. 10		GR 11 TOTAL		25% 50% 75%
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
1-10	-	-	9	4	13	28	2	2	7	10	5	4	14	5	1	1	-	-	1	2	52	4	
11-20	2	3	17	8	19	40	21	21	24	34	22	17	21	7	5	4	2	1	4	9	137	11	
21-30	7	10	22	10	5	11	15	15	18	26	6	5	36	12	11	9	6	3	3	7	129	10	25%
31-40	14	19	39	18	4	9	25	25	18	26	21	16	43	14	13	11	13	7	8	19	198	15	← 30
41-50	23	32	29	10	1	2	10	10	-	-	8	6	53	18	12	10	22	12	3	7	156	12	50%
51-60	14	19	32	15	1	2	6	6	1	1	9	7	36	11	15	13	21	11	2	5	135	11	← 54
61-70	4	6	19	9	1	2	6	6	-	-	6	5	22	7	6	5	30	16	4	9	98	8	
71-80	1	1	19	9	-	-	2	2	2	3	11	8	25	8	13	11	45	24	6	14	125	10	75%
81-90	5	7	11	5	2	4	2	2	-	-	9	7	20	7	22	18	33	18	4	9	108	8	← 83
91-100	2	3	9	4	-	-	3	3	-	-	4	3	13	4	10	8	3	2	3	7	47	4	
100+	-	-	19	8	1	2	7	7	-	-	29	22	17	6	11	9	11	6	5	12	100	8	
MEAN	52		53		25		41		29		49		54		63		69		57		54		
TOTALS	72		220		47		99		70		130		298		119		187		43		1285		

*(Represents different monthly and daily attendance patterns throughout the 1974-1975 school year).

C. INTERPRETATIONS OF MONTHLY AND DAILY ATTENDANCE PATTERNS

1. Chart II: Monthly Attendance Profile of Title I Students

a. The "average" monthly attendance profile for ASHS Title I students (for all schools) was (mean 5.5) approximately six (6) months of attendance for instruction.

b. Twenty-five percent (25th %ile) of the Title I students attended ASHS classes from one (1) to three and one-half (3.5) months.

c. Twenty-five percent (50th %ile) of the students attended ASHS classes from three and one-half (3.5) to five and one-half (5.5) months.

d. Twenty-five percent (75th %ile) of the students attended ASHS classes from five and one-half (5.5) to eight and one-half (8.5) months.

e. Twenty-five percent (99th %ile) of the students attended ASHS classes for longer than eight and one-half (8.5) months.

f. School no's 1, 2 and 9 appear (on the average) to retain Title I students for a greater number of months than is normatively characteristic of ASHS programs.

g. School no's 3 and 5 appear (on the average) to retain Title I students for a fewer number of months than the norm indicates.

2. Chart III: Daily Attendance Profile of Title I Students

a. The "average" daily attendance profile for ASHS Title I students (for all schools) was (mean 54) approximately 54 days of attendance for instruction during the school year 1974-75.

b. Twenty-five percent (25th %ile) of the Title I students attended classes from one (1) to thirty (30) days.

c. Twenty-five percent (50th %ile) of the students attended classes from thirty (30) to fifty-four (54) days.

d. Twenty-five percent (75th %ile) of the students attended classes from fifty-four (54) to seventy-six (76) days.

e. Twenty-five percent (99th %ile) of the students attended classes from seventy-six (76) to one hundred and fifty (150) days.

g. School no's 7, 8, 9, 10 had the highest daily attendance profile as compared to the norm.

h. School no's 3 and 5 had the lowest daily attendance profile in comparison to the norm.

3. Monthly and Daily Attendance Profile

Statistically speaking, the "average" ASHS Title I student attended school for five and one-half (5.5) months for fifty-four (54) days (for approximately ten days per month) of instruction.

D. COGNITIVE DATA: STANDARDIZED TEST RESULTS IN READING

Program Objective # 1: As a result of participation in the remedial reading program, the reading grade of the students (in Title I) will show a statistically significant difference between the real post-test score and the anticipated post-test score on the Metropolitan Achievement Test.

(NOTE: See appendix for the breakdown of sub-test reading scores for all students as grouped by months and days of attendance, by school and by total of all schools combined).

CHART IV: READING SCORES BY SCHOOLS
Metropolitan Achievement Test 1974 - 1975
(Mean Pre-Anticipated Post-Real Post Test Scores)

TITLE I ASHS SCHOOLS	MONTHS ATTENDANCE MEAN	N	READING PRE-TEST MEAN	ANTICIPATED POST-TEST MEAN	REAL POST-TEST MEAN	DIFFERENCE ANT. VS. REAL	df	t SCORE	SIGNIFICANCE
GR.1	5.6	72	5.1	5.3	6.3	+1.0	142	2.81	P=.01
GR.2	6.5	220	4.6	4.8	6.7	+1.9	438	8.87	P=.01
GR.3	4.0	47	4.0	4.2	5.2	+1.0	92	2.42	P=.02
GR.4	4.9	99	5.6	5.9	6.2	+.3	196	1.06	NS
GR.5	4.1	70	4.8	5.1	6.4	+1.3	138	3.42	P=.01
GR.6	5.3	130	4.3	4.6	6.0	+1.4	258	5.60	P=.01
GR.7	6.0	298	5.3	5.6	6.7	+1.1	594	6.52	P=.01
GR.8	5.4	119	5.3	5.6	6.3	+.7	232	2.50	P=.02
GR.9	6.2	187	5.6	5.9	6.4	+.5	372	1.96	P=.05
GR.10	4.8	43	6.4	5.7	6.3	+.7	84	1.62	NS
GR.11 TOTALS ALL SCH.	5.4	1285	4.9	5.2	6.2	+1.0	∞	8.18	P=.01

As a result of participation in the remedial reading program, the reading grade of Title I students showed a statistically significant reading achievement growth at the P= .01 level of significance in schools no's 1, 2, 5, 6, 7 and for the district combined.

CHART V: READING SCORES BY SCHOOLS AND DAYS ATTENDED
Metropolitan Achievement Reading Test 1974 - 1975

TITLE I ASHS SCHOOLS	NUMBER DAYS ATTENDED MEAN	N	READING PRE-TEST MEAN	ANTICIPATED POST-TEST MEAN	REAL POST-TEST MEAN	DIFFERENCE ANT. VS POST	df	t SCORE	SIGNIFICANCE
GR.1	52	72	3.2	5.5	6.6	+1.1	142	3.26	P=.01
GR.2	52	220	3.1	3.5	6.2	+2.7	358	9.97	P=.01
GR.3	25	47	4.2	4.4	5.2	+.8	92	1.96	P=.05
GR.4	41	99	5.6	5.8	6.5	+.7	196	2.50	P=.02
GR.5	29	70	5.0	5.2	6.3	+1.1	138	3.24	P=.01
GR.6	49	130	4.3	4.6	5.9	+1.3	258	4.60	P=.01
GR.7	52	298	5.2	5.5	6.9	+1.4	594	7.42	P=.01
GR.8	63	119	5.3	5.7	6.1	+.4	232	1.57	NS
GR.9	69	107	5.2	5.5	6.2	+.7	372	2.50	P=.02
GR.10	57	43	5.4	5.7	6.3	+.6	84	1.32	NS
GR.11 TOTALS	54	1285	5.4	5.7	6.2	+.5	∞	4.57	P=.01

CHART VI: READING SCORES BY MONTHS ATTENDED
Metropolitan Achievement Reading Test 1974 - 1975

TOTALS FOR ALL ASHS SCHOOLS

MONTHS ATTENDED	N	READING PRE-TEST MEAN	ANTICIPATED POST-TEST MEAN	REAL POST TEST MEAN	DIFFERENCE ANT. VS POST	df	t SCORE	SIGNIFICANCE
1	49	4.7	4.8	5.7	+.9	96	2.18	P=.05
2	62	5.1	5.2	6.3	+1.1	122	2.04	P=.01
3	150	4.9	5.1	5.2	+.1	298	.45	NS
4	150	4.9	5.1	5.3	+.2	298	.84	NS
5	150	4.9	5.1	5.6	+.5	298	2.07	P=.05
6	117	4.7	5.0	6.0	+1.0	232	3.81	P=.01
7	125	4.9	5.2	5.8	+.6	248	2.22	P=.05
8	144	4.6	4.9	5.6	+.7	286	2.91	P=.01
9	44	5.5	5.9	7.2	+1.3	86	3.07	P=.01
10	69	5.1	5.5	5.9	+.4	136	1.15	NS
10+	235	4.3	4.8	4.9	+.1	464	.64	NS
MEAN	1285	4.9	5.2	5.8	+.6	∞	4.03	P=.01

E. INTERPRETATION OF READING TEST RESULTS - COGNITIVE OBJECTIVE 1 (CHARTS IV, V, VI)

1. All of the ASHS schools combined provided remedial reading programs which produced significant reading growth for their Title I students at the .01 level of probability (confidence). The "average" ASHS Title I student gained one year and three months in his functional reading level after approximately six months of instruction. This normative one year and three months reading growth represents a real growth of nine months over what had been their previous reading achievement history at conventional high schools.

2. All of the individual ASHS schools produced significant "real" reading achievement growth, with the exception of school no's 4 and 10. The most significant reading growth for Title I students appeared in schools no's 2 and 7.

3. There is no statistical difference between months attended and days attended at ASHS Title I programs and reading achievement growth. All relationships at ASHS for either one month, ten days or up to ten months or one hundred days produced immediate and continuous significant reading achievement growth. This apparent phenomenon may be attributed to statistical or clerical error or it may be that there is some unique affective quality inherent in the ASHS programs which cares for Title I children and which produces immediate reading accomplishments. Further research and evaluation is needed in this area of "unique domain."

4. It could also be hypothesized (or rationalized) that the unique statistically significant reading achievement growth for Title I students after one or two months of instruction is attributed to an initial "Hawthorne effect" produced by belonging to new groups.

5. It should be noted that the background reading achievement levels for entering tenth (10th) grade Title I students was fifth (5th) grade. Historically, this fifth (5th) grade level represents approximately four and one-half months of normative reading growth for each year of conventional schooling prior to enrolling in ASHS.

6. Another rationalization for the significant and immediate reading achievement results in the ASHS Title I program is that it may be relatively easier to produce dramatic achievement results with young adults reading at elementary levels of word attack skill relationships and beginning comprehension than it is at the higher levels of 7, 8 and 9th grades where content, abstract relationships and higher forms of comprehension skills are required. The reading levels involved with most Title I students clustered around the 4, 5 and 6th grade reading levels of instruction and evaluation s sampling.

7. Still another rationalization to account for the immediate and unique significant reading achievement results is the fact that most Title I students have a basic fear of tests and therefore, they do poorly on their initial pre-tests. After a short period of time, in a friendly reading program, where tests and failure are de-emphasized they usually do better on tests. Therefore, their post-test results, in reality, more closely approximate their functional ("truer") reading levels (and possibly should be considered pre-test levels in future evaluations).

F. COGNITIVE DATA: STANDARDIZED TEST RESULTS IN MATHEMATICS

Program Objective # 2: As a result of the participation in the remedial math program, the math grade of the students (in Title I) will show a statistically significant difference between the real post-test score and the anticipated post-test score on the New York State Computation Test.

(NOTE: See appendix for the breakdown of sub-test mathematics scores for all students as grouped by months of attendance, by school and by total of all schools combined).

CHART VII: MATHEMATICS SCORES BY SCHOOLS
New York State Arithmetic Computation Test 1974 - 1975
(Mean Pre-Anticipated Post-Real Post Test Scores by months attendance for each AS school and total schools)

TITLE I AS HS SCHOOLS	NO. OF MONTHS ATTENDANCE MEAN	N	MATH PRE-TEST MEAN	ANTICIPATED POST-TEST MEAN	REAL POST TEST MEAN	DIFFERENCE ANT VS POST	df	t SCORE	SIGNIFICANCE
GR.1	1	72	5.6	5.7	6.9	+1.2	142	3.63	P=.01
GR.2	2	220	6.2	6.3	6.7	+.4	438	2.21	P=.05
GR 3	3	47	5.9	6.1	6.3	+.2	92	.45	NS
GR.4	4	99	6.2	6.4	7.2	+.8	196	2.86	P=.01
GR 5	5	70	5.0	5.3	5.9	+.6	138	1.74	NS
GR.6	6	130	5.7	6.0	7.2	+1.2	258	4.32	P=.01
GR 7	7	298	5.4	5.8	6.7	+.9	594	4.71	P=.01
GR 8	8	119	6.6	7.0	7.4	+.4	236	1.52	NS
GR 9	9	187	5.6	6.1	6.3	+.2	372	.75	NS
GR 10	10	43	6.3	6.8	7.3	+.5	84	1.17	NS
TOTAL ALL SCH		1285	5.9	6.2	6.8	+.6	∞	5.41	P=.01

As a result of participation in the remedial Math program, the math grade of Title I students showed a statistically significant math achievement growth at the P= .01 level of significance in school no's 1, 4, 6, 7 and for the district combined.

CHART VIII: MATH SCORES BY SCHOOLS AND DAYS ATTENDED
New York State Arithmetic Computation Test 1974 - 1975

TITLE I ADHS SCHOOLS	NUMBER DAYS ATTENDED MEAN	N	MATH PRE-TEST MEAN	ANTICIPATED POST-TEST MEAN	REAL POST-TEST MEAN	DIFFERENCE ANT. VS POST	df	t SCORE	SIGNIFICANCE
GR.1	52	72	5.6	5.9	6.9	+1.0	142	3.03	P=.01
GR.2	53	220	5.8	6.0	6.1	+.1	438	.52	NS
GR.3	25	47	6.2	6.4	6.6	+.2	92	.45	NS
GR.4	41	99	5.7	5.9	5.9	0	196	0	NS
GR.5	29	70	4.8	5.0	6.0	+1.0	138	2.93	P=.01
GR.6	49	130	5.8	6.0	6.9	+.9	258	3.81	P=.01
GR.7	52	298	5.4	5.7	6.9	+1.2	594	6.73	P=.01
GR.8	63	119	6.3	6.6	6.8	+.2	236	.74	NS
GR.9	69	187	5.5	5.8	6.1	+.3	372	1.08	NS
GR.10	57	43	6.3	6.8	7.1	+.5	84	1.17	NS
GR.11 TOTAL	54	1285	5.8	6.1	6.5	+.4	∞	2.26	P=.05

CHART IX: MATH SCORES BY MONTHS ATTENDED
New York State Arithmetic Computation Test 1974 - 1975

TOTALS FOR ALL ADHS SCHOOLS	MONTHS ATTENDED	N	MATH PRE-TEST MEAN	ANTICIPATED POST-TEST MEAN	REAL POST-TEST MEAN	DIFFERENCE ANT. VS POST	df	t SCORE	SIGNIFICANCE
	1	49	6.2	6.3	6.8	+.5	96	1.26	NS
	2	62	6.1	6.2	7.1	+.9	122	2.57	P=.01
	3	140	5.9	6.1	6.7	+.6	278	2.96	P=.05
	4	150	5.8	6.0	6.4	+.4	298	.85	NS
	5	150	5.8	6.0	6.2	+.2	298	.81	NS
	6	117	6.1	6.4	6.8	+.4	232	1.52	NS
	7	125	6.1	6.4	6.7	+.3	248	1.28	NS
	8	144	6.2	6.5	7.0	+.5	286	2.04	P=.05
	9	44	5.4	5.8	6.7	+.9	86	2.06	P=.05
	10	69	6.1	6.6	7.3	+.7	136	2.05	P=.05
	10+	225	6.0	6.3	6.5	+.1	464	3.81	P=.01
MEAN	TOTAL	1285	5.9	6.2	6.8	+.6	∞	3.34	P=.01

G. INTERPRETATION OF MATHEMATICS TEST RESULTS - COGNITIVE OBJECTIVE 2 (CHARTS VII, VIII, IX)

1. All of the ASHS schools combined provided remedial math programs which produced significant math growth for their Title I students at the .01 level of probability (confidence). The "average" ASHS Title I student gained nine months in his functional math level after approximately six months of instruction. This normative nine months math growth represents a real growth of six months over what had been Title I students previous math achievement history at conventional high schools.
2. Math achievement at the individual ASHS schools was not as proportionately represented as in reading growth. Five schools no's 1, 2, 4, 6 and 7 produced significant math score results with five schools no's 3, 5, 8, 9, and 10 producing non-significant results in math scores.
3. There appear to be no statistical difference between months attended and days attended at ASHS Title I math programs and math achievement scores.
4. The same phenomenon occurred in math as in reading with either one month, ten days or up to ten months or one hundred days producing immediate and continuous significant math achievement growth. Students who attended 2, 3, 8, 9 or 10 months all grew significantly in math, while students who attended ASHS classes for 4, 5, 6, 7 and 10+ months did not achieve as well in math test score growth.
5. The same rationale of possible statistical or clerical error as prevailed in reading may also be applicable to math.

6. As in reading, it could also be hypothesized (or rationalized) that the unique statistically significant math achievement growth after one or two months of instruction is attributed to an initial "Hawthorne effect" produced by belonging to new groups.
7. It should be noted that the background math achievement levels for entering tenth (10th) grade Title I ASHS students was the sixth (6th) grade. This is one year higher than the entering "average" reading achievement level which was at the fifth (5th) grade level.
8. The overall general achievement picture in mathematics for all ASHS schools combined and individual schools, does not appear to be as powerful (statistically significant) as in the reading achievement profiles for ASHS. The monthly achievement patterns suggests a direction which reflects that the longer one attends math classes the more score growth and more significant math achievement will be accomplished. Further study is needed in this area.
9. As in reading achievement, another rationalization to account for the significant math test score growth, maybe the fact that most Title I students have a basic fear of tests and therefore, they do poorly on their initial pre-tests. After a short period of time, in an individualized math program, where tests and failure are de-emphasized they may do better on tests. Therefore, their post-test results, in reality, more closely approximate their math levels.

H. AFFECTIVE DATA: SUBJECTIVE EVALUATIONS AND OBSERVATIONS

Evaluation Objective # 3: (a) to determine the extent to which the program, as actually carried out, coincided with the program as described in the Project Proposal (Discrepency Analysis)(Background-See Section I); (b) to determine adequacy of facilities and materials. (c) to determine degree to which recommendations from 1973-74 were implemented in 1974-75 program; (d) evaluations and observations of present ASHS Title I programs.

1. Under the supervision of the ASHS Director and staff of teachers and educational assistants, the Title I program for approximately 1400* students was in all major aspects implemented, developed and performed as described in the original Title I proposal as submitted and described in Chapter I of this report. (* Not all students had pre-post test scores).

   The ASHS Title I program in every aspect is serving the needs of the identified target population of seriously educationally handicapped Title I students. It should be noted that in the majority of cases ASHS students were observed and identified as multiply disadvantaged by virtue being educationally deprived; school dropouts; economically disadvantaged; emotionally disturbed; poor self-identity (apathy); involved with the drug culture; unwanted and uncared for. The ASHS Title I program is providing a much needed service.

2. The facilities and materials of the ASHS program are functional and adequate considering the financial duress of New York City. However, the Director and staff (as was recommended last year) are continuously looking for ways to upgrade and improve the physical facilities, materials and supplies and professional and secretarial staff ratios which are very much needed.

3. All of the recommendations from the 1973-74 evaluation have been implemented or are in the process of being developed and concluded, with two exceptions being that expanded facilities and standardized testing, research and development are still being considered.

4. Evaluator's Observations: the following features contributed to the overall statistically significant success of the ASHS Title I program:

   a. The dedication, warmth and human relations skills of the ASHS team of administrators, principals, teachers and assistants and their commitment to help children.

   b. The alternate school settings, informal atmosphere and optional learning environments present in most of the ASHS centers apparently encouraged Title I students to join and participate in all programs. The "home away from home" philosophy and aura, coupled with an "esprit-de-corps" among the staff, which treated Title I students as young independent adults as part of an extended family concept, produced immediate effective and cognitive results.

c. The "individualized" - "personalized" instructional, counseling, and tutorial aspects of the ASHS program appeared to be major factors in the Title I students apparent enthusiasm for the program.

d. The individual personal and educational guidance opportunities available to students to pursue career and job opportunities; college counseling; technical training; scholarships and financial aid plans; Veterans benefits and educational program planning in basic skills in Reading and Math and high equivalency activities.

e. The opportunities to participate in human relations workshops, "Rap" sessions, where students discussed relevant issues of personal concern, such as drugs, sex education, consumer education and environmental protection, etc.

f. The ESL: English as a Second Language program provided the opportunities for those students whose native language was not English to receive training and instruction in the basic skills of the English language.

g. The Bilingual program provided the added opportunity for Title I students to have interactions and instruction in several languages.

h. Many of the centers were developing a "school identity" and providing enrichment educational opportunities for Title I students, in the form of resource centers; pocket-book lending libraries; school newspaper centers; athletic teams and tournaments; artistic displays and creative opportunities; television and audio-visual centers; dramatics workshops, plays, carnivals and other student sponsored and initiated activities.

IV. SUMMARY OF MAJOR FINDINGS, CONCLUSION AND RECOMMENDATIONS

A. MAJOR FINDINGS

1. The monthly and daily attendance patterns of ASHS Title I students are very mobile, flexible and irregular. The average" ASHS Title I student attended school for five and one-half months for fifty-four days of instruction.

2. Objective 1: The ASHS remedial reading program produced statistically significant reading achievement growth at the P = .01 level of significance for the total district combined and at the P = .01 to P = .05 levels for eight out of eleven schools involved in the program.

3. Objective 2: The ASHS remedial math program produced statistically significant math achievement growth at the P = .01 level of significance for the total district combined and at the P = .01 to P = .05 levels for five out of eleven schools involved in the program.

4. The ASHS Title I program in every aspect is serving the needs of the identified target population of seriously educationally handicapped Title I students. It should be noted that in the majority of cases ASHS students were observed and identified as multiply disadvantaged by virtue being educationally deprived; school dropouts; economically disadvantaged; emotionally disturbed; poor self-identity (apathy); involved with the drug culture; unwanted and uncared for. The ASHS Title I program is providing a much needed service.

B. CONCLUSIONS AND RECOMMENDATIONS

1. It is the recommendation of this evaluation that the ASHS Title I project be continued and expanded to include additional staff and materials.

2. Instruction: In addition to individualized instruction with programmed materials, have the teachers actually teach lessons (concepts) to groups of students periodically. Some teaching strategies could include students teaching students, paraprofessionals teaching students, consultants and volunteers working with students, etc. There should be some group interaction in the learning process. Too often there is a one-to-one relationship with materials alone and group dynamics is avoided.

3. Instructional Materials: In addition to commercial materials and textbooks, there should be more teacher-made and student-made materials tailored to the diagnostic individual needs of each student and group. If possible, more concrete and varied instructional materials at different reading levels are also needed in the classrooms.

4. Testing:

   a. A standardized diagnostic achievement test in reading and math is needed which can both satisfy evaluation and instruction requirements.

   b. Teachers should not test merely for sake of testing. Standardized tests should be used as diagnostic tools which actually pin-point student deficiencies. Tests should be returned quickly and reviewed by teacher with the student item by item. Learning and teaching strategies and rationales should be discussed with student.

5. Record Keeping: Title I records and all student achievement cumulative record forms should be formalized and centralized in each school office. Wherever possible, one form or one record (with information about attendance, pre-test and post-test information, etc.) should be kept. This would simplify record keeping and increase the accuracy of evaluations.

6. Conferences: More district-wide ASHS Title I conferences should be held to clarify matters of policy and increase communications and articulation. Meetings and "workshops" between and among teachers, administrators, centers could be beneficial. Pooling of resources and sharing of information might result in greater cognitive and affective achievements for students.

7. Sense of Community: Continuous emphasis should be focused upon the ASHS philosophy of giving students a sense of school community. The students' identity of actually belonging to some "center" or "school" is apparently important to growth. There should be a sense of community service... of somehow tying together the threads of basic education, job training, counseling, into a more cohesive whole.

V. EXEMPLARY PROGRAM ABSTRACT

Those aspects of the ASHS remedial reading and remedial math programs which accounted for the significant achievement results in both scholastic areas were identified as:

1. The alternate school organizational structure which encouraged self-motivation to enter the program, coupled with an individualized (self-paced) one to one and small group instructional structure produced immediate reading and math achievement results. (Both the reading and math standardized achievement scores were significant at the P=.01 level of significance.)

2. The human relations skill of the ASHS team of directors, administrators, principals and teachers coupled with their commitment to work with "children with problems" created a "pressure-free" working environment and an "esprit-de-corps" learning atmosphere which produced immediate affective and cognitive results.

3. The "individualized" and "personalized" instructional counseling and tutorial aspects of the ASHS program appeared to be major factors in the Title I students apparent initiative to: (a) attend the program and (b) remediate reading and math deficiencies through independent study (with adult professional and peer help.)